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| 10/042,973      | 01/09/2002  | Arthur Devon Mitchell | BLD920010016US1     | 6668             |

23550 7590 06/03/2004

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EXAMINER

LE, DIEU MINH T

| ART UNIT | PAPER NUMBER |
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2114

DATE MAILED: 06/03/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/042,973

Applicant(s)

MITCHELL, ARTHUR DEVON

Examiner

Dieu-Minh Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/09/02.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**Part III DETAILED ACTION**

**Specification**

1. This Office Action is in response to the application 10/042,973 filed on 01/09/02.
2. Claims 1-18 are presented for examination.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by Terrell et al. (US Patent 2003/0210686 A1) hereafter referred to as Terrell.

As per claim 1:

Terrell explicitly teaches:

- A network router [fig. 1, item 102] having an internal automatic backup [col. 6, par. 0070] comprising:
  - a primary port facility [fig. 1, col. 6, par. 0067];
  - a card array (i.e. network adapter on a single integrated circuit) [fig. 1, item 105] having at least one backup router card [fig. 1, item 104 or members 113-117];
  - a switch fabric [fig. 2, item 211 and 213, col. 25, par. 0202], wherein the switched fabric automatic replaces a failed router card connected to the primary port facility with a backup router card from the card array (i.e. network adapter on a single integrated circuit) [fig. 1, col. 6, par. 0066 and 0070].

As per claims 2-3:

Terrell further explicitly teaches:

- the primary port facility comprises a primary processor and secondary processor [fig. 24, processor 2402 and 2404];
- a primary port facility has serial connection ports for connection to router card [fig. 1, col. 26, par. 0205].

As per claim 4:

Terrell further explicitly teaches:

- an information system for receiving a failure message (i.e., error reports) [fig. 6, item 602] from the primary port facility [fig. 1 and 2, col. 29, par. 0229 and col. 38, par. 0281 and 0285];
- a switching system (i.e., redirected message) for mechanically replacing the failure router card with the backup router card in response to the failure message [fig. 1 and 2, col. 25, par. 0202 and col. 38 par. 0285].

As per claims 5 and 6:

Terrell further explicitly teaches:

- the information system includes a bus for communicating routing information between the primary port facility and the card array [fig. 1 and 2, col. 26, par. 0205];
- the switching system [col. 25, par. 0202] includes a replacement mechanism for mechanically replacing the failed router card with the backup router card [fig. 1 and 2, col. 6, par. 0066 and 0070].

As per claims 7:

Terrell further explicitly teaches:

- the failed router card is moved into an expanded bay (i.e., expanded network device, redundancy due to

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failure) by the switch fabric [fig. 2, item 211 and 213, col. 25, par. 0202].

As per claims 8-13:

These claims are similar to claims 1-7. The only minor different is that claim 8 include "the switched fabric includes an information system for receiving a failure message from the primary port facility and a switching system for replacing the failed router card with the backup router card" limitation; however, this limitation is illustrated in dependent claim 4 of independent claim 1. Therefore, these claims are also rejected under the same rationale applied against claims 1-7. **In addition, all of the limitations have been noted in the rejection as per claims 1-7.**

As per claims 14-18:

These claims are similar to claims 1-7. The only minor different is that claim 14 include " a primary port facility having a primary processor and a secondary process" limitation and "the switched fabric includes an information system for receiving a failure message from the primary port facility and a switching system for replacing the failed router card with the backup router card"; however,

Terrell explicitly teaches:

- the primary port facility comprises a primary processor and secondary processor [fig. 24, processor 2402 and 2404];
- a primary port facility has serial connection ports for connection to router card [fig. 1, col. 26, par. 0205];
- a switching system (i.e., redirected message) for mechanically replacing the failure router card with the backup router card in response to the failure message [fig. 1 and 2, col. 25, par. 0202 and col. 38 par. 0285].

Therefore, these claims are also rejected under the same rationale applied against claims 1-7.

**Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable of Sarkimen et al. (US Patent 2003/0101426 A1 hereafter referred to as Sarkimen).

As per claim 1:

Sarkimen explicitly teaches:

- A network router [fig. 1, abstract, col. 1, par. 0002] having an internal automatic backup [col. 6, par. 0064] comprising:
  - a primary port facility (i.e., interface) [fig. 1, col. 5, par. 0057 and 0058];
  - a card array (i.e. single integrated circuit board) [col. 6, par. 0063].
  - a switch fabric [col. 2, par. 0012 and col. 5, par. 0053], wherein the switched fabric automatic replaces a failed router card [col. 6, par. 0064].

Sarkimen does not explicitly teach:

- backup router card.



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However, Sarkimen does disclose capability of:

- load balancing, redundancy, and fail-over within the network routing and switching system [col. 2, par. 0012 and col. 5, par. 0058].

Therefore, it would have been obvious to an ordinary skill in the art to realize that the Sarkimen's isolating network routing and switching system would have included such backup router card feature in order to providing the network fail-over, load balance, and redundancy capability therein. This is further obvious because the Sarkimen explicitly illustrates the capability of re-directing traffic flow from device to other device in order to achieving the network un-interrupting routing and switching operation [col. 5, par. 0058].

As per claims 2-3:

Sarkimen further explicitly teaches:

- the primary port facility comprises a primary processor and secondary processor [fig. 2, line card, ingress/egress processor and fabric processors].

Even though, Sarkimine does not disclose capability of:

- serial connection ports connectivity.

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However, Sarkimen does clearly demonstrate the router connectivity among computing devices [fig. 1, items 100, 102, 104, 112 and fig. 2]. These device are normally connected via serial interfaces such as X. 25, T1, etc... [col. 1, par. 0005].

Therefore, this would have been obvious to an ordinary skill in the art to realize that the serial interface is one of the most commonly protocol used within the routing networking environment.

As per claim 4:

Terrell further explicitly teaches:

- an information system for receiving a failure message (i.e., parity trailer used for error detection) [col. 7, par. 0072] from the primary port facility [fig. 1, col. 5, par. 0057 and 0058]
- a switching system [col. 2, par. 0012 and col. 5, par. 0053] for mechanically switching system [col. 2, par. 0012 and col. 5, par. 0058].

Sarkimen does not explicitly teach:

- backup router card.

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However, Sarkimen does disclose capability of:

- load balancing, redundancy, and fail-over within the network routing and switching system [col. 5, par. 0058].

Therefore, it would have been obvious to an ordinary skill in the art to realize that the Sarkimen's isolating network routing and switching system would have included such backup router card feature in order to providing the network fail-over, load balance, and redundancy capability therein. This is further obvious because the Sarkimen explicitly illustrates the capability of re-directing traffic flow from device to other device in order to achieving the network un-interrupting routing and switching operation [col. 5, par. 0058].

As per claims 5 and 6:

Terrell further explicitly teaches:

- the information system includes a bus for communicating routing information between the primary port facility and the card array [fig. 1-5, col. 13, par. 0117]
- the switching system [col. 2, par. 0012 and col. 5, par. 0053] includes a replacement mechanism for mechanically replacing the failed router card [col. 6, par. 0064].

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Sarkimen does not explicitly teach:

- backup router card.

However, Sarkimen does disclose capability of:

- load balancing, redundancy, and fail-over within the network routing and switching system [col. 2, par. 0012 and col. 5, par. 0058].

Therefore, it would have been obvious to an ordinary skill in the art to realize that the Sarkimen's isolating network routing and switching system would have included such backup router card feature in order to providing the network fail-over, load balance, and redundancy capability therein. This is further obvious because the Sarkimen explicitly illustrates the capability of re-directing traffic flow from device to other device in order to achieving the network un-interrupting routing and switching operation [col. 5, par. 0058].

As per claims 7:

Sarkimen further explicitly teaches:

- the failed router card is moved into an expanded bay(i.e., expanded network device, redundancy due to

failure [col. 5, par. 0058) by the switch fabric [fig. 2, col. 1, par. 0010 and 0012].

As per claims 8-13:

These claims are similar to claims 1-7. The only minor different is that claim 8 include "the switched fabric includes an information system for receiving a failure message from the primary port facility and a switching system for replacing the failed router card with the backup router card" limitation; however, Terrell explicitly teaches:

- a switching system [col. 2, par. 0012 and col. 5, par. 0053] for mechanically switching system [col. 2, par. 0012 and col. 5, par. 0058].

Therefore, these claims are also rejected under the same rationale applied against claims 1-7. **In addition, all of the limitations have been noted in the rejection as per claims 1-7.**

As per claims 14-18:

These claims are similar to claims 1-7. The only minor different is that claim 14 include " a primary port facility having a primary processor and a secondary process" limitation and "the switched fabric includes an information system for receiving a failure message from the primary port facility and a

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switching system for replacing the failed router card with the backup router card" and limitation; however,

Sarkimen explicitly teaches:

- the primary port facility comprises a primary processor and secondary processor [fig. 2, line card, ingress/egress processor and fabric processors];
- a switching system [col. 2, par. 0012 and col. 5, par. 0053] for mechanically switching system [col. 2, par. 0012 and col. 5, par. 0058].

Therefore, these claims are also rejected under the same rationale applied against claims 1-7. In addition, all of the limitations have been noted in the rejection as per claims 1-7.

#### Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (703)305-9408. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DIEU-MINH THAI LE  
PRIMARY EXAMINER  
ART UNIT 2114**